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EXAMINER	
SCOTT, RANDY A	
ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/660,817	KOPETZ, HERMANN	
	Examiner	Art Unit	
	Randy Scott	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/29/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This Office Action is in response to the Application filed September 11, 2003.

Specification

1. The disclosure is objected to because of the following informalities:

The applicant's abstract is longer than 150 words and should be minimized to 50 to 150 words.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Appropriate correction is required.

Claim Objections

2. Claims 1-11 are objected to because of the following informalities:

On line 2 of claim 1, the term "comprising" should be proceeded by a comma.

On line 3 of claim 1, the term "each computer node" should be –each of said computer nodes-.

On line 6 of claim 1, the term "where the communication controllers" should be – where communication controllers -.

On line 7 of claim 1, the term "each communication controller" should be – each said communication controllers -.

On line 12 of claim 1, the term "the form up-date-in-place" should be –a form of up-date-in-place -.

On line 16 of claim 1, the term "the form exact one time storage" should be –a form exact one time storage -.

On line 19 of claim 1, the term "a ring buffer store" should be –said ring buffer store-.

On line 2 of claim 2, the term "status data" should be – said status data -.

On line 3 of claim 2, the term "event data" should be – said event data -.

On line 2 of claim 3, the term "status data" should be – said status data -.

On line 3 of claim 3, the term "event data" should be – said event data -.

On line 2 of claim 4, the term "status data" should be – said status data -.

On line 3 of claim 4, the term "event data" should be – said event data -.

On line 3 of claim 4, the term "the moment" should be –a moment-.

On line 2 of claim 5, the term "the receiver" should be –a receiver-.

On line 4 of claim 5, the term "immediately after the assignment" should be –immediately after assignment-.

On line 4 of claim 5, the term "the assignment of the last open element" should be –assignment of the last open element-.

On line 4 of claim 5, the term "the last open element" should be –an element opened last-.

On line 6 of claim 5, the term "the next event data element" should be –next element of said event data-.

On line 3 of claim 6, the term "a data element" should be – said data element -.

On line 4 of claim 6, the term "a data element" should be – said data element -.

On line 3 of claim 7, the term "a data element" should be – said data element -.

On line 3 of claim 7, the term "the receiver" should be –a receiver-.

On line 3 of claim 7, the term "the current round" should be –a current round-.

On line 4 of claim 7, the term "this round" should be – the round -.

On line 4 of claim 8, the term "the sender" should be –a sender-.

On line 4 of claim 8, the term "the receiver" should be –a receiver-.

On line 1 of claim 11, the term "A communication method" should be –The communication method -.

On line 3 of claim 12, the term "the hardware" should be –hardware-.

On lines 2, 3, 4, 5, and 6 of claim 1, line 4 of claim 8, line 3 of claim 9, and line 3 of claim 10 references to figures within the drawing have been made. The claims are objected to because they include reference characters 111, 112, 113, 114, 210, 230, 130, and 220, which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 recites the limitation " the communication network interface " in line 4, the term "the communication network interface" is confusing and unclear since there isn't any antecedent basis for the term since a communication network interface wasn't specified previously in the claim.

5. Claim 1 recites the limitation "the host" in line 12 and the term "the host" is confusing and unclear since there isn't any antecedent basis for the term since a host wasn't specified previously in the claim, only a host computer. Note that the applicant may resolve specifying which host is referring to the issue of clarity by specifying which host in the limitation.

6. Claim 1 recites the limitation "the reception memory" in line 14 and the term "the reception memory" is confusing and unclear since there isn't any antecedent basis for the term since a reception memory wasn't specified previously in the claim.

7. Claim 3 recites the limitation "the data name" in line 3 and the term "the data name" is confusing and unclear since there isn't any antecedent basis for the term since a data name wasn't specified previously in the claim or in independent claim 1.

8. Claim 7 recites the limitation " the current round position" in line 3 and the term "the current round position" is confusing and unclear since there isn't any antecedent basis for the term since a round position wasn't specified previously in the claim or in claim 1.

9. Claim 9 recites the limitation "the CAN protocol" in line 4 and the term "the CAN protocol" is confusing and unclear since there isn't any antecedent basis for the term since a controller area network protocol wasn't specified previously in the claim or in claim 1.

10. Claim 10 recites the limitation "the OMG IIOP protocol" in line 4 and the term "the OMG IIOP protocol" is confusing and unclear since there isn't any antecedent basis for the term since a OMG IIOP protocol wasn't specified previously in the claim or in claim 1.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

12. Claims 1 and 12 are rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528).

In reference to claim 1 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, lines 7-20, which teaches this limitation because an intelligent distributed network architecture (IDNA) is implemented containing a plurality of nodes. An intelligent call processor (ICP), as shown in sec. 9, lines 9-12, is located within each node of the IDNA and is generally implemented as a general purpose computer that contains service control functions), where the communication network interface is located between the communication controller and the host computer (see spec, sec. 13, lines 59-67 and sec. 14, lines 1-8, which implies this limitation because a resource proxy is used as a control interface for control services and objects running on each IDNA node), where the communication controllers are connected via a communication system (see spec, sec. 10, lines 33-36, which implies this limitation because the ICP that controls

communication with the resource complex, controls each resource through a communication pipe), and where each communication controller is provided with a local transmission memory and a local receiver memory for sending and receiving data (see spec, sec. 12, lines 55-57, which teaches this limitation because a local memory is located on each IDNA node storing data sent and received by each service admin component) and where the communication controller manages the status data in the form up-date-in-place by the host in the transmission memory (see spec, sec. 15, which implies this limitation because a network management system is used to control the operations of each ICP, including the status of processes), non-consuming reading by the communication controller out of the transmission memory (see spec sec. 28, lines 28-39, which implies this limitation because the control server contains a data management client that obtains data stored within the memory cache of the server admin), and up-date-in-place by the communication controller in the reception memory and non-consuming reading by the host computer out of the reception memory (see spec, sec. 28, lines 57-67, which implies this limitation because the data management API located with in the control server is used for data reception by the local cache before the data is read by the data management client) and wherein the communication controller implements one or more of the procedural steps corresponding to claim 1 in the hardware by means of a state machine (see spec, sec. 18, lines 3-5, which implies this limitation because the control class implements call processing (used to detect channeled event stored in the event queue as shown in sec. 6, lines 48-53) such as a basic finite state machine).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a

discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory.

The general concept for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory is well known in the art as illustrated by Edwards et al, which teach a limitation for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system (see spec, sec. 3, lines 16-22, which implies this limitation because a data bit is used to determine whether a pay-per-view program has been displayed. Once the program is over the status data bit is changed and the event data code is erased from memory. The system uses a controller to carry out communications to a subscriber, notifying the subscriber that the event code has been generated an that the subscriber may view the pay-per-view data), managing the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory (see spec, sec. 16, lines 32-39 and sec. 17, lines 48-50),

which implies this limitation because event data pertaining to event authorization may be stored temporarily in a memory buffer), consuming reading of the communication controller out of the ring buffer store of the transmission memory (see spec, sec. 26, lines 8-14, which implies this limitation because the controller receives event start commands from the RAM of a microprocessor in order to display the authorized data to users), exact on-time storage by the communication controller in a ring buffer store of the reception memory (see spec, sec. 26, lines 8-14 and sec. 18, lines 35-37, which implies this limitation because the status of the access/connection to the authorized programming is stored in the memory of the microprocessor), and consuming reading by the host computer out of the ring buffer store of the reception memory (see spec, sec. 17, lines 46-54, which implies this limitation because the event data pertaining to authorized access may be obtained in the microprocessor's buffer store).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

13. Claim 2 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Spartz et al (Pat # 5,878,036).

In reference to claim 2 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the discrimination bits are a part of a transmitted message.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the discrimination bits are a part of a transmitted message is well known in the art as illustrated by Spartz et al, which teach the limitation for providing a discrimination bit in a message that is used to indicate status data (see spec, sec. 9, lines 10-42, which implies this limitation because a message indicating status information relating to alignment status also includes a discrimination bit specifying the type of message being sent).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the discrimination bits are a part of a transmitted message as illustrated by Sparks et al in order to improve upon the categorization of transmitted messages within a system, as implied in sec. 9, lines 10-50 of Sparks et al.

14. Claim 3 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1.

In reference to claim 3 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the discrimination bit that distinguishes between status data and event data is allocated a priori to the data name and can be derived from the data name.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the discrimination bit is allocated a priori to the data name and can be derived from the data name is rejected under obvious design optimization because giving a discrimination bit a priori to the data name isn't concrete due to fact that there is no correlation between a data name and the data it refers to in a system used to identify event data. There is no a priori way to confirm that a given data item is in fact the one named by a data name, therefore claiming a priori for a discrimination bit used to distinguish status data from event data would be considered vague and obvious to one of ordinary skill in the art.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and

consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the discrimination bit is allocated a priori to the data name and can be derived from the data name as the implementation of a priori allocated to a discrimination bit is vague within the scope of obvious design optimization.

15. Claim 4 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Chang et al (Pat # 6,240,453).

In reference to claim 4 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the discrimination bits can be derived from the moment of arrival of a message.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the discrimination bits can be derived from the moment of arrival of a message is well known in the art as illustrated by Chang et al, which teach the limitation for wherein the discrimination bits can be derived from the moment of arrival of a message (see spec, sec. 1, lines 45-60, which implies this limitation because a watch service method is implemented to notify consumers that an event correlating to a data change or change of status. The event data may be made aware to a consumer of the data by using a push method and sending the data from the service application to the consumer terminal).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the discrimination bits can be

derived from the moment of arrival of a message as illustrated by Chang et al in order to successfully implement event channels in a communication system, as implied in sec. 7, lines 35-47 of Chang et al.

16. Claim 5 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Krone et al (Pat # 5,841,974).

In reference to claim 5 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the discrimination bits are a part of a transmitted message.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the discrimination bits are a part of a transmitted message is well known in the art as illustrated by Krone et al, which teach the limitation for wherein the communication controller at the receiver transmits an intercept signal to the host

computer no later than immediately after the assignment of the last open element in the ring buffer store for event data in order to induce the host computer to consume the event data and provide memory space for the next event data elements (see spec, sec. 4, lines 29-55, which implies this limitation because a control unit transmits a signal at the receiver message queue buffer to the local node host processor for the node event data, specified in sec. 5, lines 34-41, in order to allot more space in the message queue for more event data).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the communication controller at the receiver transmits an intercept signal to the host computer no later than immediately after the assignment of the last open element in the ring buffer store for event data in order to induce the host computer to consume the event data and provide memory space for the next event data

elements as illustrated by Krone et al in order to improve upon the distribution of event data in a message buffer, as implied in sec. 4, lines 1-55 of Krone et al.

17. Claim 6 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Narisi et al (Pat # 6,233,619).

In reference to claim 6 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data wherein the communication controller at the receiver, based on the moment of arrival of a data element at the receiver, decides whether a data element contains user data or control data of a higher protocol.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the communication controller at the receiver, based on the moment of arrival of a data element at the receiver, decides whether a data element contains user data or control data of a higher protocol is well known in the art as illustrated by Narisi et al,

which teach the limitation for deciding whether a data element contains user data or control data of a higher protocol (see spec, sec. 23, lines 45-52, sec. 28, lines 14-24, and sec. 43, lines 12-36, which imply this limitation because a control data buffer and a user data buffer are implemented within the present invention to determine whether or not data transferred using MSS communication is user data or control data).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the communication controller at the receiver, based on the moment of arrival of a data element at the receiver, decides whether a data element contains user data or control data of a higher protocol as illustrated by Narisi et al in order to determine the characteristics of data sent using a communication protocol, as implied in sec. 22 lines 38-52 of Narisi et al.

18. Claim 7 and 8 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Narisi et al (Pat # 6,233,619).

In reference to claims 7 and 8 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the communication controller at the receiver, based on the moment of arrival of a data element at the receiver, decides whether a data element contains user data or control data of a higher protocol.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the communication controller at the receiver, based on the moment of arrival of a data element at the receiver, decides whether a data element contains user data or control data of a higher protocol is well known in the art as illustrated by Narisi et al, which teach the limitation for deciding whether a data element contains user data or control data of a higher protocol (see spec, sec. 23, lines 45-52, sec. 28, lines 14-24, and sec. 43, lines 12-36, which imply this limitation because a control data buffer and a user data buffer are implemented

within the present invention to determine whether or not data transferred using MSS communication is user data or control data).

Narisi et al teach all the limitations as disclosed above except for wherein the communication controller at the receiver, based on the current round position of a time-driven protocol, decides whether a data element transmitted in this round contains user data or control data of a higher protocol and wherein the communication controllers interpret the event data in the sense of an a priori known higher protocol and present them to the communication network interface 220 at the sender and at the receiver in the form as prescribed by this a priori known higher protocol.

The general concept of deciding whether a data element contains use data or control data of a higher protocol based on the current round position of a time-driven protocol is rejected under obvious design optimization because the applicant failed to include a positive element for the term "time-driven protocol" or a "round position". The only positive element specified for the term "higher protocol" was a controller area network protocol and an Internet-ORB protocol. In Narisi et al, the even data is already established in the sense of a priori because the control data buffer is implemented that already defines the control and user data sent as data transfers through the transport layer interface, as shown in sec. 1, lines 8-13.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of

the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious to one of ordinary skill in the art at the time of the invention modify Deo et al to include the step of deciding whether a data element contains use data or control data of a higher protocol based on the current position of a controller area network protocol or an internet-orb protocol and wherein the communication controllers interpret the event data in the sense of an a priori known higher protocol and present them to the communication network interface 220 at the sender and at the receiver in the form as prescribed by this a priori known higher protocol in order to determine the characteristics of data sent using a communication protocol, as implied in sec. 22 lines 38-52 of Narisi et al.

19. Claim 9 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Chasmawala et al (Pat # 6,845,416).

In reference to claim 9 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and wherein the communication controllers present the event data to the communication network interface at the sender and at the receiver in the form as prescribed by the CAN protocol.

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the communication controllers present the event data to the communication network interface at the sender and at the receiver in the form as prescribed by the CAN protocol is well known in the art as illustrated by Smith, which teaches the limitation for using controllers to provide event data to a I/O interface at the sender and at the receiver in the form by a CAN protocol (see spec, sec. 2, lines 1-9 and lines 26-38, which implies this limitation because an event occurring within a CAN interface may be signaled by a device, such as a controller (as shown in sec. 1, lines 36-41) to an interconnecting bus using a communication interface (as shown in sec. 5, lines 11-19).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-

time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the communication controllers present the event data to the communication network interface at the sender and at the receiver in the form as prescribed by the CAN protocol as illustrated by Marko et al in order to signal event data in a communication system, as implied in sec. 2, lines 1-9 and lines 26-38 of Chasmawala et al.

20. Claim 10 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Chang et al (Pat # 6,769,014).

In reference to claim 10 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data communication and

the controllers present the event data to the communication network interface at the sender and at the receiver in the form as prescribed by the OMG Internet Inter-ORB Protocol (IIOP).

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the communication controllers present the event data to the communication network interface 220 at the sender and at the receiver in the form as prescribed by the OMG Internet Inter-ORB Protocol (IIOP) is well known in the art as illustrated by Chang et al, which teach the limitation for using communication controllers to provide event data messages to an interface at the sender and at the receiver in the form by an IIOP protocol (see spec, sec. 6, lines 15-26, which implies this limitation because communication controllers are used to transmit event data messages, shown in sec. 9, lines 4-19, through a Java interface, shown in sec. 7, lines 55-67, to be sent and received using the form IIOP, as shown in sec. 8, lines 37-52).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as

illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the communication controllers present the event data to the communication network interface 220 at the sender and at the receiver in the form as prescribed by the OMG Internet Inter-ORB Protocol (IIOP) as illustrated by Chang et al in order to transmit data using an effective protocol, as implied in sec. 8, lines 37-52 of Chang et al.

21. Claim 11 is rejected under 35 USC 103 as being unpatentable over Deo et al (Pat # US 6,393,481) in view of Edwards et al (Pat # 5,604,528) as applied to claim 1 and further in view of Chang et al (Pat # 6,769,014).

In reference to claim 11 Deo et al teach a communication method for real-time applications in a distributed computer system, made up of a number of computer nodes, where each computer node is provided with a host computer and a communication controller (see spec, sec. 8, as stated above).

Deo et al teach all the limitations as disclosed above except for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data communication and the controllers present the event data to the communication network interface at the sender and at the receiver in the form as prescribed by the OMG Internet Inter-ORB Protocol (IIOP).

The general concept for providing a bit to determine whether a data element contains status data or event data using a controller in a time-based communications system is well known in the art as illustrated by Edwards et al (see spec, sec. 3, lines 16-22, as stated above).

The general concept of wherein the communication controllers simultaneously simulate various higher protocols for the transmission of event data is well known in the art as illustrated by Chang et al, which teach the limitation for wherein the communication controllers simultaneously simulate various higher protocols for the transmission of event data (see spec, sec. 8, lines 37-52, which implies this limitation because many higher protocols, such as IIOP, RMI, and MQSeries, may be used as mail transport protocol. This particular prior art reference reads on the claim language because the event message may be transported simultaneous so a default transport protocol may be simulated simultaneously as well).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo to include the use of a limitation for wherein the communication controller of a time-driven communication system decides on the basis of a discrimination bit whether a data element contains status data or event data and manages the event data in the form exact one-time storage of the host data in a ring buffer store of the transmission memory, consuming reading of the communication controller out of the ring buffer store of the transmission memory, exact on-time storage by the communication controller in a ring buffer store of the reception memory and consuming reading by the host computer out of the ring buffer store of the reception memory as illustrated by Edwards et al in order to effectively detect event data in a network, as implied in sec. 3, lines 16-22 of Edwards et al.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Deo et al to include the use of a limitation wherein the communication controllers simultaneously simulate various higher protocols for the transmission of event data as illustrated by Chang et al in order to transmit data using an effective protocol, as implied in sec. 8, lines 37-52 of Chang et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Scott whose telephone number is 571-270-1598. The examiner can normally be reached on Mon - Thurs. 7:30-5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-272-6681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.A.S.

9 April 2007

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